

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

LG DISPLAY CO., LTD.,)	
)	
Plaintiff,)	Civil Action No. 06-726 (JJF)
)	Civil Action No. 07-357 (JJF)
v.)	
)	CONSOLIDATED CASES
CHI MEI OPTOELECTRONICS)	
CORPORATION, et al.)	
)	
Defendants.)	
)	
)	

**DECLARATION OF DR. JOHN D. VILLASENOR IN SUPPORT OF
CMO'S OPENING BRIEF ON CLAIM CONSTRUCTION**

I, John D. Villasenor, declare as follows:

I. BACKGROUND QUALIFICATIONS

1. I am a Professor in the Electrical Engineering Department of the University of California, Los Angeles, where I have been on the faculty since 1992. I have been retained as an expert in this matter by Irell & Manella LLP on behalf of CMO.

2. My research activities at the University of California, Los Angeles have included the development of innovative, high-performance multimedia communications and computing technologies, including extensive work related to video processing. Details of my research have been featured on the cover of *Scientific American* and in numerous technical journals.

3. I obtained a Bachelor of Science degree in Electrical Engineering from the University of Virginia in 1985, and Master of Science and Doctorate degrees in Electrical Engineering from Stanford University in 1986 and 1989, respectively. While at Stanford, I concentrated my research on signal processing and communications.

4. I am a named inventor on at least nineteen issued U.S. patents, arising primarily from my research activities at the University of California and industry collaboration. My patents relate generally to video processing, multimedia communications, and related areas.

5. I am a co-author over 100 papers published in peer-reviewed journals and conference proceedings, covering such topics as wireless communications, networking, and digital image and video processing and communications. I have also co-authored numerous contributions to various international communications standards groups, including the Geneva-based International Telecommunications Union (“ITU”).

6. Further details of my background and experience are provided in my curriculum vitae, which is attached as Exhibit A.

II. MATERIALS REVIEWED AND UNDERLYING ASSUMPTIONS

7. In making this declaration, I have reviewed U.S. Patent No. 6,008,786 (the “’786 patent”). I have also reviewed the prosecution history of the ’786 patent.

8. I understand that in construing patent claims, courts seek to determine what a person of ordinary skill in the art would understand the claims to mean primarily in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history. In particular, I understand that the patent specification is considered the single best guide to the meaning of a particular claim term.

9. I also understand that, in general, claim language should be given its ordinary and customary meaning as would be understood by one of ordinary skill in the art at the time of the invention. An exception to this general rule is where a patentee defines his own terms, giving a claim term a different meaning than the term would otherwise possess, or expressly disclaims or disavows the full claim scope. In these situations, the inventor’s lexicography governs. Also, the specification may resolve ambiguous claim terms where the ordinary and accustomed meaning of the words used in the claims lacks sufficient clarity to permit the scope of the claim to be ascertained from the words alone.

10. I further understand that when courts look to the specification for clarification of ambiguous claim terms, courts still must avoid reading unclaimed limitations appearing in the specification into the claims. Moreover, I understand that courts may occasionally consider supplemental resources such as dictionaries, encyclopedias, treatises and expert testimony to assist in determining the ordinary and customary meanings of claim terms.

11. I also understand that, in general, a claim is invalid for indefiniteness if it is “insolubly ambiguous” and not “amenable to construction.” *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). “Determining whether a claim is definite requires an analysis of ‘whether one skilled in the art would understand the bounds of the claim when read in light of the specification.’” *Omega Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1320-21 (Fed. Cir. 2003) (quoting *Miles Labs., Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993)). “[D]espite the absence of explicit antecedent basis, ‘[i]f the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite.’” *Energizer Holdings, Inc. v. International Trade Com'n*, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006) (concluding that “anode gel” is by implication the antecedent basis for “said zinc anode” and reversing the holding of invalidity for indefiniteness).

12. In my opinion, “a person of ordinary skill in the art” for the technology of the ’786 patent would have a bachelor’s degree in electrical engineering and several years of experience in the field of digital video processing, or an equivalent combination of education and work experience.

III. UNDERSTANDING OF SELECTED CLAIM TERMS OF THE ’786 PATENT

A. “adjusting means” (claim 3)

13. LGD argues that the claim term “adjusting means” in dependent claim 3 is indefinite. Given the context of the claims and specification of the ’786 patent, one of ordinary skill in the art would understand that claim 3 should depend from claim 2 and the “adjusting means” of claim 2 provides the antecedent basis for the same term in claim 3. In the claims, the

term “adjusting means” occurs only in claim 3 and the immediately preceding claim 2. In the specification, the ’786 patent states that: “In accordance with the subject invention, the difference in the dependency of the transmissivity/applied voltage characteristics for each color can be effectively compensated for. Further, the amount of the adjustment can be varied with the grey scale level for accurate compensation.” Col. 5:53-57. Given this context from the claims and specification of the ’786 patent, claim 3 is not insolubly ambiguous and is amenable to construction.

B. “display cells” (claim 7)

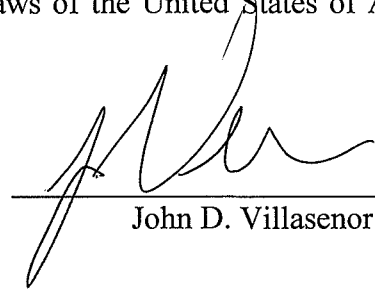
14. LGD argues that the claim term “display cells” in claim 7 is indefinite. The claim term “display cells” in claim 7 is not indefinite. Claim 7 discloses a liquid crystal multicolor display comprising display cells associated with driver circuits containing calculation logic and delay logic. One of ordinary skill in the art would have understood the term “display cells” in the context of the ’786 patent, and the plain meaning of “display cells” should apply.

C. “data control means” (claim 11)

15. LGD argues that “data control means” in claim 11 is indefinite. In the context of the claims and specification of the ’786 patent, one of skill in the art would understand that this term should be the “calculation logic” term of the immediately preceding claim 10. The context of the claims makes the understanding of claim 11 clear. Claim 11 depends from claim 10, which in turn depends from independent claim 7. “Data control means” does not appear anywhere in claims 7 or 10. Claims 7 and 10 include the limitation “calculation logic.” In the context of the ’786 patent, the term “data control means” in claim 11 should be the “calculation logic” in the immediately preceding claim 10, and that, as stated in claim 11, “includes an addition or subtraction of the binary signal representing a change of at least one gray scale level for at least one color.” Given this context from the claims and specification of the ’786 patent, claim 11 is not insolubly ambiguous and is amenable to construction.

Executed on August 10, 2008, at Los Angeles, California.

I declare under penalty of perjury of the laws of the United States of America that the foregoing is true and accurate.



John D. Villasenor

EXHIBIT A

John D. Villasenor

UCLA Electrical Engineering Department
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Los Angeles, CA 90095

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Employment

1992 – present University of California, Los Angeles Los Angeles, CA

Professor, Electrical Engineering Department

- Responsible for proposing, developing, and executing externally sponsored research projects
- Lead project teams comprising faculty, technical staff, and students on multidisciplinary projects for industry and government sponsors
- Conduct research to develop innovative, high-performance communications and computing technologies. Areas of work include hardware, software, theory, and algorithms. Research featured on cover of *Scientific American* and in numerous technical journals.
- Vice Chair of the Electrical Engineering Department from 1997-2002
- Instructor for graduate and undergraduate classes in signal processing and communications

1990 – 1992 Jet Propulsion Laboratory Pasadena, CA

Radar Science and Engineering Section

Developed new techniques for imaging and mapping the earth from space

Other Professional Activities

- Strategic Technical Advisor to Granite Ventures. Substantial experience performing due diligence on companies, evaluating technical and business strengths and weaknesses, and identifying and facilitating strategic relationships.
- Have served as a consultant/advisor to public and private (startup through IPO) technology companies/organizations. Example engagements since joining UCLA in 1992: BellSouth, Broadcom, DivX, the Japanese Ministry of International Trade and Industry, Hewlett Packard, NASA's Jet Propulsion Laboratory, Nokia, Ricoh, Samsung, and Warner Brothers.
- Participation in various standards organizations and industry consortia (including the International Telecommunications Union, the International Standards Organization, the Internet Engineering Task Forces) for development of new communications and coding standards. Assisted the motion picture industry in developing the standard for digital cinema.

Other Professional Activities (continued)

- Service on editorial boards for several leading technical journals in the areas of communications and signal processing published by the Institute of Electrical and Electronic Engineers; have also served as a committee member for several major annual communications and signal processing conferences
- Have served as an expert in several intellectual property matters and have substantial experience in technology licensing

Education

- | | |
|--------------------|--|
| 1986 – 1989 | Stanford University
<i>Ph.D. in Electrical Engineering. Focus on signal processing and communications.</i> |
| 1985 – 1986 | Stanford University
<i>M.S. in Electrical Engineering.</i> |
| 1982 – 1985 | University of Virginia
<i>B.S. in Electrical Engineering.</i> |

Patents

Approximately 20 issued and pending U.S. patents in areas including video processing, data compression, and communications

Publications

Over 100 papers published in peer-reviewed journals and conference proceedings. Publications represented include *Nature*, *Scientific American*, the *Proceedings of the IEEE*, *IEEE Computer*, *IEEE Signal Processing Magazine*, and numerous *IEEE Transactions*. Areas covered include wireless communications, networking, image and video processing and communications, non-volatile memory, random number generation, adaptive computing hardware, software and design methods. In addition, several dozen contributions to communications standards groups. List of selected journal and conference papers available at <http://www.ee.ucla.edu/~ipl>